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ABSTRACT

This paper provides guidelines and suggestions to aid in the development and implementation of a process to facilitate linkages between planning and evaluation as well as articulation across secondary and postsecondary levels. The information provided is based on the results of a literature review, two surveys of states regarding the linking of planning and evaluation, and analyses and examples from three onsite case studies. The research revealed several common threads evident in the diverse organizational patterns of state education departments: (1) the initiation of a major event at the state level that provided a framework for developing new lines of cooperation, coordination, and linkages; (2) formulation of a clear policy or mission statement; (3) strong leadership; (4) administrative commitment; (5) interagency cooperation; (6) regionalization; (7) planning/evaluation systems and data collection/use systems; and (8) a comprehensive approach to vocational education. Fourteen references are listed. (KC)

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Working Papers

LINKING PLANNING AND EVALUATION: UNDERSTANDING THE PROCESS IN VOCATIONAL AND TECHNICAL EDUCATION

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LINKING PLANNING AND EVALUATION: UNDERSTANDING THE PROCESS IN VOCATIONAL AND TECHNICAL EDUCATION

Introduction

Planning and evaluation activities in vocational education have both practical and legislative initiatives. The Carl D. Perkins Act requires that all states receiving federal funds submit a state plan and carry out specific evaluation activities. While all states comply with this mandate, the ongoing, practical planning and evaluation needs of the states seem to take place on a level subordinate to the process of meeting legislative requirements (Strickland & Asche, 1987). It is this latter, ongoing process and the opportunity to develop more effective planning and evaluation processes in the states that is of concern in this paper.

Vocational education has undergone scrutiny from a number of perspectives over the last decade. Changes in federal legislation and funding of vocational education has emphasized service to special populations and assessment of occupational outcomes, yet de-emphasized collection of data to substantiate these priorities. Publications such as A Nation at Risk (The National Commission on Secondary Vocational Education, 1986) and reports from the National Assessment of Vocational Education have focused on several issues of policy critical to the future of vocational education. Yet, expectations for vocational education both at institutional and individual levels are based on varying philosophies and differing views as to the role of vocational education in society (Lotto, 1986). Consequently, the task of evaluation and planning has been hard pressed, as Oakes (1986) put it, to move beneath the "bottom lines" and look at the overall program of vocational education.

Contributing to the dilemma of vocational educators is the fact that much of the literature on planning and evaluation treat these two activities as separate, distinctive functions. The separation of planning and evaluation is evident not only in terms of different research methods, but also in terms of different professional and expert communities. As a result, the issue of linkage in planning and evaluation becomes entrenched by professional interests and practice rather than revealed as an area of intellectual or institutional content. Vocational education is no exception to this phenomenon with planning and evaluation often carried out by different departments or different personnel within an agency (Asche, Strickland, & Elson, 1988).

This paper proposes the notion of planning and evaluation as one process--an ongoing, regular dynamic between two interdependent functions. Linkage in this context is not viewed simply as a means to unite planning and evaluation, but rather as a multifaceted phenomenon of the process. Consequently, this is not an issue of linkage alone but of linkages as aspects of an inquiring, integrated system.

Federal vocational legislation placed increasing emphasis on assessment, evaluation and planning since the 1976 Vocational Education Amendments. States responded by developing a myriad of models, systems and procedures for the generation, collection and analysis of labor market, enrollment, programmatic and follow-up data. Most states have some form of systematic approach to planning and evaluation. These approaches are widely variable in scope and sophistication and, usually, the evaluation and planning functions are not symbiotic. Brannon (1985) summarized this evolution in requirements as a shift from a focus on quantity to an increasing focus on quality of vocational programs. Such requirements move beyond simple assessment (counting) and imply the need for a

more interactive relationship between planning and evaluation functions. Since most states have some systematic approach to both planning and evaluation in place (Asche, 1985; Edington & Cruikshank, n.d.), one might assume "all is well" in the planning and evaluation arena.

Unfortunately, most planning systems are focused on operations and administrative planning, thus the evaluation systems tend to be compliance oriented (Asche, 1985). Purposive, functional links between comprehensive evaluation and substantive planning do not exist in most states (Strickland & Asche, 1987). Vocational education is not alone in its struggles with linking relevant evaluation to the planning process as indicated by the rapidly growing literature base in the areas of evaluation utilization and innovation/change management. Such linking is particularly critical in vocational education, however, since this field must constantly meet the challenges posed by rapidly changing client populations, technology, funding, and state and federal policy initiatives.

The intent of this paper is to provide guidelines and suggestions to aid in the development and implementation of a process to facilitate linkages between planning and evaluation as well as articulation across secondary and postsecondary levels. The actual components of such a process will be unique to each state administrative structure and educational mission. For this reason, guidelines and examples have been provided rather than a step by step procedure for implementation. The basis of this paper is research, funded by the National Center for Research in Vocational Education, University of California, Berkeley to identify approaches for improving the evaluation utilization through better linking of state level evaluation and planning.

This information is based on the results of a review of literature, two surveys of states regarding the linking of planning and evaluation, and analyses and examples from three on-site case studies. This document should serve as a reference for generating ideas and identifying potential pitfalls as a plan is formulated to improve planning and evaluation linkages.

Research Methodologies

The purpose of this research was to develop research-based methodologies for organizational use in the improvement of evaluation utilization through better linking of state level evaluation and planning. The final objective of this research was to develop materials designed specifically to assist state vocational personnel to link planning and evaluation within their respective states.

State Surveys

The first phase of this program of research included a review/synthesis of literature in education and related disciplines such as social change, public administration, strategic planning and evaluation (Asche, Strickland, & Elson, 1989). After completion of the review, a national survey was conducted to elicit information from the states and territories on evaluation and planning linkages. Particular care was taken to obtain data on activities for both secondary and postsecondary vocational education and on interaction or articulation between these two levels.

The review of literature indicated that there is considerable variance in the ways vocational education is organized and administered within states. Two types of surveys were developed. The purposes of the first survey were to obtain (a) information from state vocational directors regarding the organizational arrangement for administration of secondary and postsecondary vocational education and (b) the names, addresses, titles and

telephone numbers of the individuals responsible for planning and for evaluation at the secondary and postsecondary levels in each state. This instrument was mailed during the first quarter of 1989 to 55 states and territories. With one follow-up mailing and telephone contacts, responses were received from 51 states and territories for a response rate of 93%. The data derived from this instrument formed the basis for all further contacts with the states.

The second and primary data collection instrument was designed to elicit basic information on how planning and evaluation were administratively organized, the procedures employed in strategic and operational planning and the mandated and optional evaluation activities. The draft instrument was reviewed by external experts and planning and evaluation personnel from six states. After modification, the areas included in the final instrument were:

1. The location of vocational education within the state's organization structure,
2. The identification of offices to which the persons responsible for planning and evaluation report,
3. A description of how those responsible for planning coordinate with other agencies and departments,
4. A description of long-range planning procedures,
5. A description of evaluation specifications included in the state plan,
6. A description of ways evaluation affects the planning process, both formally and informally,
7. A description of how sources, control and allocation of funds affects planning and evaluation, and
8. The respondent's comments on how planning and/or evaluation could be improved.

The first mailing, one follow-up mailing and follow-up telephone calls yielded responses from 43 states for a response rate of 78%. Eleven of the responding states did not provide information for both the secondary or postsecondary levels. Since this was a qualitative type of instrument, requiring data from multiple sources within many of the states, the response rate was deemed acceptable. Documentary analysis techniques were used to organize this information.

Case Studies

The second phase of this project involved determination of suggested strategies for improving planning and evaluation linkages. Specific linkage components were identified and assessed along with the suggested strategies. These findings were used to develop interview procedures for the case studies in the third phase of this research. Information obtained through the literature review and survey phase was used to prepare a portfolio of information on each site. Both the preliminary findings and the portfolio information were used to design a case study approach for gathering the necessary information to either (a) verify the provisional strategies or (b) contribute to refinement or revision of the provisional strategies.

The states chosen for in-depth study by use of on-site interviews were selected on the basis of the review of literature and the states' responses to both project questionnaires. Recommendations from selected state directors of vocational education, resource persons in the U. S. Office of Adult and Vocational Education and the National Council for Vocational Education were considered. An attempt was made to accommodate other factors such as complexity (population and federal funding level), geographic region of the country, and overall approach to administration of vocational education. As a result, three states were selected--a western state, a mid-western state, and an eastern state.

Approximately three days were spent in conducting the interviews in each state. Interviews were held with the state director of vocational education, appropriate administrative personnel in the director's office, persons responsible for evaluation and planning for both secondary and postsecondary levels and other persons within the state's Department of Education and/or Community College administration and governing boards. Interviews were also conducted with regional and local personnel responsible for planning and/or evaluation. Both individual and group interviews were held in each state. The interviews were recorded for later transcription and analysis.

Interviews were basically open-ended but structured around areas of concern derived from the project's earlier research activities. The central focus of the interviews was on ways in which planning and evaluation were mutually supportive, factors which encouraged linking of planning and evaluation and factors which impeded such linking.

Data available from the state surveys and the case studies were analyzed and examined against the proposed planning/evaluation linkage strategies. Results from this latter phase of analysis and refinement of the linkage strategies constitute the substance for development of a guide for use by vocational education planning and evaluation personnel.

Current Status of Planning and Evaluation Linkages in State Department of Education

Organizational Structures

One of the questions on the survey had to do with the actual location of secondary and/or postsecondary vocational administration. While over a dozen organizational structures were identified, five major structures seemed to account for the majority of state administrations. The first structure is characterized by two separate boards (Figure 1a)--one primarily for secondary education and one primarily for postsecondary education. In most instances, the secondary board acts as the sole state agency for receiving Perkins funds for vocational education programs. In some states, the federal funds are received by the postsecondary board. Twelve states (28%) responding to the survey described this form of organization.

The second category evidenced two variations of one basic structure. In this category, vocational administration ultimately answers only to a state board of education (see Figure 1b). A separate board or system for postsecondary education is present in the state, but no vocational programs come under the jurisdiction of this board. Under the board of education, the administration of vocational education is housed within the department of education. Responsibility for secondary and postsecondary vocational programs may be combined or separated into two units. This organizational structure was identified by 11 (26%) of the survey respondents.

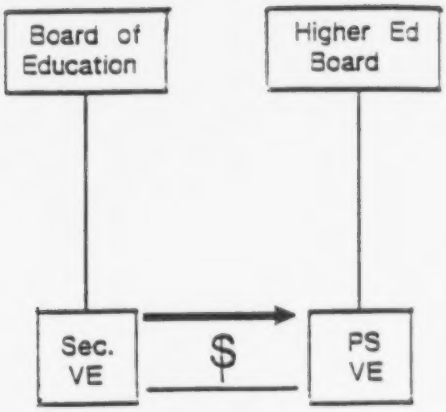

Figure 1a: Separate secondary/postsecondary boards primarily linked by funding

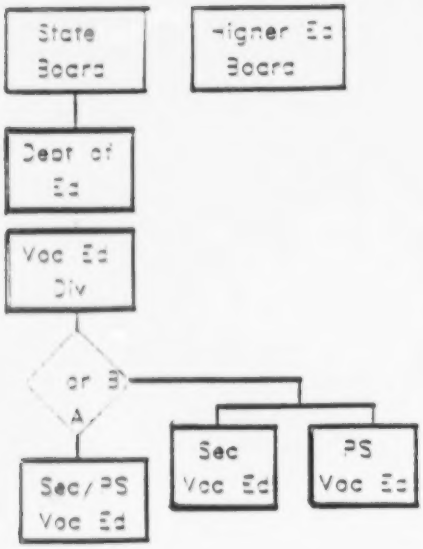

Figure 1b: Combined administrations under one vocational division

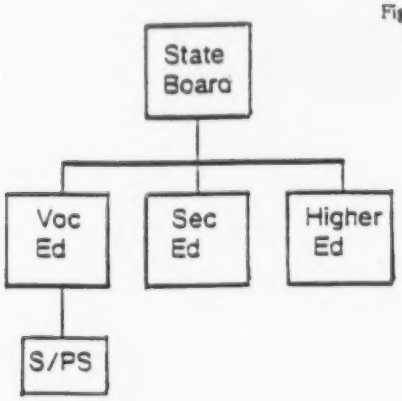

Figure 1c: Separate vocational division, secondary division, and higher education division

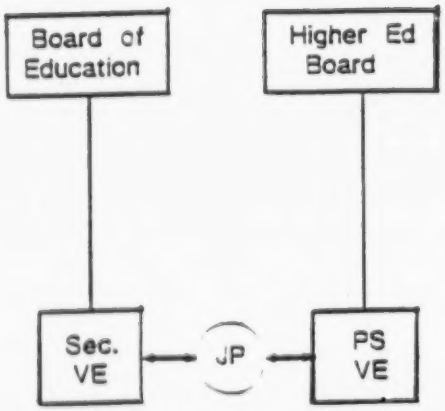

Figure 1d: Separate secondary/postsecondary boards with formal planning procedures or committees

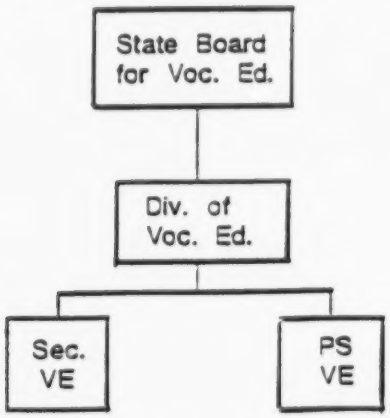

Figure 1e: Separate State Board for Vocational Education governs programs

In Figure 1c, administration of vocational education(both secondary and postsecondary) is housed in a unit or agency separate from the department of education and other agencies answering directly to the state board of education. As in the second category, a separate system for higher education is present in the state, but no vocational programs come under the jurisdiction of this board. Five states (12%) reported administrative structures characterized by this category.

The fourth major category (see Figure 1d) appears very similar to the first category. The major difference is the presence of a formal system of joint planning to facilitate the linkage of planning and evaluation functions. This linkage is developed within the secondary and postsecondary administrations as well as between secondary and postsecondary management structures. This structure is becoming an increasingly popular form of structuring vocational administrations as several respondents indicated that progress is being made within their states to move to this structure. While Perkins monies still flow primarily through the secondary agency, substantive input and exchange characterize the allocation and planning of programs at both levels. In some cases, all providers of vocational education (including JTPA and community based organizations) are involved in the joint planning/evaluation process. Seven states (16%) were grouped in this category.

The fifth category included 4 states (9%) that reported administrative structures characterized by a separate state board for vocational education (see Figure 1e). This board governs all vocational programs, both secondary and postsecondary, separate from other boards responsible for either secondary or postsecondary education. The state director for vocational education reports directly to the state board for vocational education.

While these major categories collectively comprise most state structures, some states evidenced structures that were more or less individually unique. The remaining four state respondents, consequently, were not included in the major structure categories described above.

The primary emphasis of this research was to identify linkages, or lack thereof, between planning and evaluation in secondary and postsecondary administrations at the state and local level. Articulation between secondary and postsecondary programs was also of interest.

While no one structure category appears to best accommodate planning and evaluation linkages, that illustrated in Figure 1d represents a deliberate effort to make planning and evaluation a more visible and coordinated process. Also, the tendency for some states to restructure in order to (a) effect coordination between secondary and postsecondary sectors; (b) enable regionalization of planning and evaluation procedures; and/or (c) allow for a more direct flow of planning/evaluation information into the policy or decision making context, suggests that administrative structures may be a tool by which to facilitate more effective planning and evaluation practices.

Any form of linkage in the administrative processes of vocational education at the state level is couched in the organizational structure of the specific state in question. The information gathered on state organizations by this research effort concurs with two similar studies by Woodruff in 1978 and Gentry in 1979. The vocational education systems of the responding states and territories had similar objectives, but were characterized by structures, delivery systems, and funding provisions as to make each virtually unique (Gentry, 1979; Woodruff, 1978). A study of state governance structures in 1986 by Faddis also found that the majority of states (39) operated under the state board of education

although that also included the state board acting as a separate board for vocational education.

The major shift in organizational structure since the studies by Woodruff and Faddis is the movement towards vocational education being split between the state board of education for secondary vocational education and a higher education governing body for postsecondary vocational education. Although the federal requirement for a sole state agency to administer secondary and postsecondary vocational education under the Perkins Act suggests a view that vocational education is, or can be made into, a unified system, the realities of state governance suggest something quite different (Goodwin, 1989).

In comparing the organizational structures identified by Woodruff and the data from the survey, it is evident that there is a movement toward joint planning and administration of vocational education at the state board level (see Figure 1d). At the same time, the actual administration of secondary and postsecondary education are still largely separated at the lower levels of administration. As the importance of overall coordination in national human resource development efforts continue, particularly relating to articulation between secondary and postsecondary programs, the composition of state and local vocational education systems will become increasingly important (Lawrence, 1987). As this coordination is developed, linkages between planning and evaluation may be one way to aid in the timely development of the needed structural changes. Coordination across various agencies involved in aspects of human resource development remains a major governance problem. There is an increasing awareness of the need to bring coherence to governance of the overall education and training system (Lawrence, 1987).

Common Threads for Facilitating Linkages

Planning and evaluation continue to be important elements in vocational education legislation and administration. However, they are only components in a larger governance structure that is in a time of change. To effectively tie them into a comprehensive, integrated method of driving the administration of a state's education system, planning and evaluation must fit into the evolving scene of state organizational structures as identified in the preceding section.

Through the survey data and case study transcripts, several common threads are evident in the diverse organizational patterns of state education departments. These common threads are elements of organizational structure that have the potential to aid the linking of planning and evaluation through the improvement of statewide articulation and linking across all levels of education, from high schools to major universities.

Major Event (Change Initiative)

One factor (element) that was prevalent in all three states involved in the case studies was the initiation of a major event at the state level that provided a framework for developing new lines of cooperation, coordination, and linkages. The purpose (result) of this major event is to provide a common reference point from which all other initiatives can generate. It can also be a vehicle to aid in questioning the status quo and working to try new approaches to educational administration. The events identified in the case studies ranged from a mandate from the legislature for program improvement, to a statewide initiative of education for employment, and a project to develop statewide expectations for the future. The event must be viewed in a long range timeframe due to the time involved in developing and implementing the concepts involved. All three states involved in the case studies have several years invested in their respective major initiative that is working to drive the educational system changes for each state.

Policy Focus or Mission Statement

The selection of an impetus for change needs to result in the generation of a second important factor. For linkages to develop, a clear policy or mission statement must be formulated for the state to utilize as a guide for its educational programs. This policy statement should be based on the results of linking planning and evaluation. The statement is often designed as long range or strategic planning in the form of statewide objectives. This form of planning should incorporate the analysis of available evaluation data in trying to develop a direction to move based on the current status of education in the state. One associate superintendent from a state department of education indicated that a master plan must provide a state and regional focus on vocational education.

Leadership

Once an idea for changes in objectives or procedures has been organized, leadership is needed at all levels of the organization to build support for a change in the status quo, as well as having a person or group of people working to direct the overall progress of change. One state identified the necessity for strong leaders at the regional and local level as well as the state level. This was evident as regional plans began to be submitted. Some regions had not developed the interaction and cooperation that was needed and expected of the regional structure.

Administrative Commitment

The process of bringing the goals of a mission statement into reality rely heavily upon the strong commitment of the state department staff towards the objectives identified. Evidence of such support is found in the ability of state staff to provide leadership in developing such mission statements, and then proceeding to gain support and create initiatives at the local and regional levels for those objectives. Support from the local and regional levels is essential for the long term success of any initiative or program developed. Maintaining and utilizing formal and informal ties between planning and evaluation for organizational and long range planning as well as program improvement will aid the development of the statewide educational programs at all levels.

Interagency Cooperation

Interagency cooperation is critical to the flow of information, and linkage of planning and evaluation. Interagency cooperation is necessary not only at the state level, but across agencies and community based organizations at the local level as well. There are several specific ways that such coordination can be achieved as identified through the survey on linking planning and evaluation. These include:

1. Associate or state directors involved in joint planning committees,
2. Advisory groups formed to maintain contact with related groups at all levels of planning,
3. Joint planning meetings used to involve interested groups and agencies,
4. Ad hoc and standing task forces used to identify and organize the needed information from the various groups and agencies involved,
5. Interagency planning councils utilized to incorporate input from specific agencies on a continual basis, and

6. Formal coordination agreements between agencies involved in the planning processes.

Regionalization

One form of linking and articulation utilized in all three of the case study states for improving programs and statewide efficiency is regionalization. Regionalization involves the development of articulation and cooperation at the local level between the LEAs and between the LEAs as a (regional) group and postsecondary institutions. Regional coordination between government agencies, community or privately based vocational education and training providers, and the public educational institutions integrates the community needs into the planning and evaluation processes.

All three of the states selected for on-site interviews utilized some form of regional organization, although the degree of control and formality of the structure varied from state to state. Based on the case study interviews, several factors are important to the success of any form of regionalization, if used to benefit overall articulation, cooperation, planning, and evaluation.

First, there must be support for the regionalization concept from the state level. As stated above, a clear policy direction, leadership, and commitment are factors that must support the concept.

Second, it is helpful to have some form of joint coordination agreement in place at the local level between secondary and postsecondary institutions prior to the full scale implementation of regionalization. This is primarily to provide the time and structure needed to help build trust across the different institutions and get them used to working together. One initial problem in forming a regional structure is the traditional competition and turf battles that sometimes develop between the institutions and agencies involved. Time in needed to develop the trust and understanding between all the groups involved before any major changes or projects are undertaken. One local administrator noted that he and many of his colleagues had feelings of turf protection and that the college had some underlying purposes. He suspected that the college wanted something from the local districts or that the college was in trouble and it would use him. As soon as the college was out of trouble he and the other districts would be dropped. This local official emphasized, however, he soon found that the regionalization ". . . was a godsend because it brought together independent school districts and the college into a very formal and friendly partnership in wanting to do things together." As a result "a formal, yet friendly, partnership between public schools and colleges" was established. This planning process sets the tone for policy development according to one state staff member.

The third factor consists of regional boundaries. The actual composition of a region is dependent upon current structure, demographics, and the willingness to redraw boundaries. The western state developed regions that have a group of local schools working with an area vocational center, JTPA delivery area, several community-based programs and at least one postsecondary institution. Each agency/institution across the state is associated with only one region. In the midwestern state, there are twice as many regional systems, as service delivery areas (SDAs), and community colleges due to the unwillingness to draw boundaries along existing SDA or community college borders. The distinction of what group works with another is unclear due to overlapping boundaries. Community-based organizations are not members of the regional boards. This situation has caused some problems in the utilization of the regional approach across the state. The eastern state operates a regional approach at the secondary level, and is currently working on better coordinating postsecondary interactions with those regions. In this state, the

philosophies of secondary and postsecondary vocational education are not compatible. Philosophical differences can hinder coordinated efforts towards statewide regionalization of all educational levels. The more clear-cut are the regional boundaries, the greater are the opportunities to form effective regional groups. All levels of education must equally support the regional approach and see its benefits if such an initiative is to be successful.

One potential stumbling block in the regional approach is the issue of ownership and control. The western state had a very formal and structured approach to regional boards. Local schools, vocational centers, other providers of vocational training, and colleges are full members of the regional board. Costs of regional administration were not an issue. The midwestern state operates regional control boards that are supported by fees paid from each member based on their full-time equivalent. Generally, the board consists of superintendents from each member district. Postsecondary institutions have ad-hoc representation through a committee, and do not pay a fee, or directly influence board decisions. A few regions do have colleges that are involved as full voting members on the board, and pay a prorated fee based on full-time students that take 12 credits a semester. This format eased the cost to the colleges, and helped settle the issue of control over the board. The college was a member equal to all the others, and on the board because of an interest in being involved in the regional decisions. This issue of cost is not always a problem depending on the regional administration design. It appears to become a concern when a large number of districts are involved.

Once a regional structure is developed, and the major stumbling blocks have been cleared up, there are many benefits that can be earned through the utilization of a regional approach. The midwestern state utilized the regional level to look at broader economic and demographic trends that had an impact on all the members of the board. This information was utilized for strategic planning and decision making.

Postsecondary - Secondary Coordination. Regionalization can be a great help in the movement towards improved articulation and coordination between secondary and postsecondary education. Duplication of programs can be lowered, dual credit courses have increased the potential for a greater, more broad-based student participation, and duplication of facilities and equipment can be decreased. The western state eliminated any unwarranted duplication of programs within a region and utilized the facilities wherever available. Some high school classes travel to a nearby college to use the specialized equipment and some college courses travel to area high schools to utilize the equipment in those facilities.

In an attempt to better utilize the student's time, and provide more flexibility, the midwestern state developed dual credit acceptance programs for high school courses. Credit for these courses count at both the high school and college level.

Clear, open communications between postsecondary and secondary levels are needed to insure success in articulation initiatives. Compatible philosophies also tie into that communication need. The eastern state includes state funded colleges that do not feel obligated to work with vocational education. Linking between secondary and postsecondary education in that state is limited to interested colleges on an individual basis, and to developing other approaches such as working with private technical schools to provide articulated programs.

Impacts on Funding. Funding is directed to the regional level in all three case studies to some degree. This allows more efficient and effective utilization of funds because they are distributed more equitably to the programs that need upgrading in a given year depending on the proposals for funding uses that are collected from the local schools.

Funding can become a problem depending on the involvement of the postsecondary sector. Some colleges will be involved 100%, pay their share of support, and have their funding also flow into the regional level. However, if a college is an invited guest, it will not pay the full amount of support, and its funding will not necessarily go to the regional board level. This situation has been problematic in some instances.

Business and Industry Involvement. Another important factor in successful regionalization and linking planning and evaluation in vocational education is the involvement of business and industry. Funding problems can also be aided to some degree by this group. The midwestern state utilizes input from businesses and industries to help relate the concerns of the end users of vocational education into macro level issues such as policies, mission statements, and approaches to integrating academic and vocational programs.

Information provided to the western state by business and industry is utilized to develop labor market information. Moreover, this information serves as the basis for evaluation of current programs and equipment in relation to meeting the needs of employers.

The eastern state involved business and industry personnel in the redirection of the statewide vocational curriculum. The development of new curriculum guides to fit the new programs received direct input from business and industry. Along with providing labor market information and identifying program needs, expertise and funding are also potential results of involving business and industry in the regional efforts at articulation and development of up-to-date vocational programs.

Planning-Evaluation Systems and Data Collection/Use Systems

Evaluation had its impact on planning, typically, through an interactive state/local system. This involved either local evaluations incorporated into the development of the state plan or a state evaluation influencing the development of local plans. Evaluation was critical in program improvement efforts, most often providing the basis for development of local action plans or funding of improvement initiatives. Evaluation served also to support funding or refunding of programs, courses, or vocational projects.

The lack of a well designed planning and evaluation system, or data collection system is problematic to efforts in developing linkages between planning and evaluation, articulation, or regional administrative structures. All three case study states have in-depth data collection systems, and have extensive evaluation procedures for analyzing the data collected.

Performance indicators and labor market information are being touted as desired methods for use in evaluating vocational programs. One state official expressed concern over the use of indicators such as satisfaction of students and employers. He stressed the need to emphasize "what the students know and what they can do." A regional director criticized the use of labor market data to evaluate programs. His contention was the labor market data may miss what is happening in industry. Cancelling a program based on labor market data may result in removing skills needed by students in one or more other programs.

Comprehensive Approach to Vocational Education

Finally, one element contributing to effective linkage came more from on-site observation than from survey results--emphasis on comprehensive vocational education.

Vocational education has several program areas of instruction which can exhibit varying levels of strength, activity, and cooperation. Potentially, such fragmentation can detract from viewing vocational education as a whole rather than the sum of its parts. Attempts to regard vocational education from a more comprehensive perspective have the advantage of being able to detect means for renewing programs and delivery systems for all of vocational education. The three case study states have vocational education administrative structures that are designed to facilitate the coordination of vocational education with academic education, and for coordination and cooperation across the service areas within vocational education.

Summary of Factors Involved in Linking Planning and Evaluation

All the factors that have been discussed must act or react within the existing environment surrounding them. This environment is directly impacted by the governance structure of the individual state. There are also several incentives and disincentives within an environment that will aid or hinder attempts at linking and articulation within an educational system. The incentives include some form of regional administrative structure; a clear policy direction; leadership; postsecondary/secondary coordination; state department commitment; planning/evaluation systems and a usable/effective data collection system. The disincentives include the issue of tradition and maintaining the status quo; a difficulty in taking risks in administrative planning; problems in understanding the complete benefits of articulation and linking; demographic differences across a state's geography; the time needed to build up trust between agencies, businesses, and individuals; and the lack of similar evaluation procedures, philosophies, and context of secondary and postsecondary educational systems.

Through effective linking and articulation, several positive impacts on vocational education can be generated:

- Commitment to vocational education at all levels, and an understanding of some of the problems involved,
- Ownership of the local/regional groups in the planning process,
- Cooperation and coordination of secondary and postsecondary programs,
- Access to vocational education for more students, and
- Improved funding utilization.

An associate superintendent in a state department of education summarized the effects of a properly designed and executed planning and evaluation process. He said that such a process would improve vocational education and have a dynamic impact on students by emphasizing the worth and nature of individuals that were not college bound.

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